

CHAPTER 2

2. ALTERNATIVES

2.1. Alternatives

TVA is considering three alternatives for managing its public land around Watts Bar Reservoir. Under Alternative A (No Action), TVA would continue to use the existing 1988 Plan, with minor revisions to reflect allocation changes made over the past 17 years and current TVA policy. The Action Alternatives (Alternative B and C) would make substantial changes to the 1988 Plan and guide future land use decisions. These proposed changes are based on evaluations, collected reservoir data, public input, and technical staff input. Alternative B (Balanced Development and Recreation), would enhance economic and recreation potential by allocating 9 parcels to Zone 5, Economic Development or Zone 6, Developed Recreation. Alternative C (Balanced Conservation and Recreation) would enhance conservation and informal recreation potential by allocating 12 parcels to Zone 4, Natural Resource Conservation or Zone 6, Developed Recreation; and implementing all of the proposed IRM-based activities. Upon review of all comments from the draft EIS, TVA staff will recommend a preferred alternative to the TVA board for approval. TVA's selected alternative would guide TVA resource management and property administration decisions on the TVA public land surrounding Watts Bar Reservoir until the Plan is revised in response to changing needs.

2.1.1. Alternative A – The No Action Alternative

Under the No Action Alternative, TVA would continue to use the 1988 Watts Bar Reservoir Land Management Plan that currently guides land use decisions affecting TVA lands surrounding Watts Bar Reservoir. The 1988 Plan documents actual and prospective uses indicated for TVA managed land based on 1988 information. Land use requests received from applicants are evaluated for consistency with the 1988 Plan. Land use proposals compatible with the 1988 Plan are approved or denied based on environmental reviews and other administrative considerations. If a request is not compatible with the current land use, then TVA Board approval is required to change allocation, following completion of necessary reviews.

The 1988 Plan used 19 allocation categories, to manage 10,387 acres (see Table 2.1-1). Under Alternative A, these categories would continue to be used by TVA as the basis for future land use decisions. The 1988 Plan did not allocate residential shoreline or other marginal shoreline strips along the reservoir nor did it include TVA project lands at Kingston Fossil Plant, Watts Bar Nuclear Plant, Watts Bar Fossil Plant (retired), and Watts Bar Dam Reservation. Also, the 1988 plan did not include land transferred to other agencies under easement or other agreements, which TVA still owns. Therefore under Alternative A, although some management would continue to be provided by TVA's Shoreline Management Policy (SMP), the Watts Bar residential shoreline and marginal shoreline strips would continue to have no formal land use allocation. Activities on TVA project lands would continue to be planned independently by their respective TVA operative.

Except for the already approved Lower Watts Bar Unit (LWBU), resource management activities of land allocated for that purpose would be limited to regulatory compliance and maintaining public health and safety.

Table 2.1-1. Allocation Category Definitions (1988)	
Allocation	Description
1. Public Recreation	<p>Tracts allocated for public recreation will be made available for development by a municipal, county, State, regional, or Federally agency. As funds are available, TVA will consider developing selected needed public recreation facilities where no other agency can help develop them.</p> <p>Public recreation tracts are intended to support a wide range of recreation activities, and may have facilities such as; beaches, toilets, roads, campgrounds, parking lots, game and court areas, launching ramps, and trails. Large public recreation areas may have onsite managers.</p>
2. Commercial Recreation	<p>Tracts allocated for commercial recreation are reserved for developments requiring waterfronts, such as; marinas, docks, launching ramps, rental cabins, rails, motels, pools, campgrounds, golf courses, restaurants, and other outdoor recreation facilities.</p> <p>On tracts allocated for new commercial recreation developments, TVA will seek private investors with the financial and managerial capability to develop large-scale facilities that can become destination points for tourists and local reservoir users. To encourage high-quality private development, TVA may provide incentives such as assisting with conceptual site planning; conducting market studies; and assisting with road building, grading, or installation of utilities.</p> <p>TVA may provide technical assistance to existing commercial operators on or near small tracts allocated for commercial recreation.</p>
3. Water Access	<p>Tracts allocated for water access will be available for development of boat ramps, courtesy piers, and car and trailer parking lots to provide public boating access to the reservoir. TVA will take the lead in developing water access tracts, but develop and maintenance could be shared with other Federal, State, county, or local agencies.</p>
4. Informal Recreation	<p>Informal recreation tracts will be maintained for passive, dispersed activities such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. Buildings, paved access, or development that would tend to concentrate public use will be discouraged. Forestry, agriculture, and wildlife management practices will be permitted as long as they do not limit public use of the land or drastically alter the physical land base.</p>
5. Barge Terminal Sites	<p>Tracts allocated for barge terminals will be available to public or private entities for construction of transfer facilities for loading and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. These sites would be conveyed to a developer at fair market value either at public auction sale in fee or by easement.</p> <p>Each terminal site is identified in the tract descriptions as either special purpose or multipurpose. Special purpose barge terminals would be associated with specific industrial plants and owned or operated by one or more industries. Such terminals are not usually available to other shippers.</p>
6. Fleeting Area	<p>Tracts allocated for barge fleeting areas will be used to anchor offshore mooring facilities (cables, buoys, or cells) used by the towing industry to switch barges between tows of barge terminals. Land-based</p>

Table 2.1-1. Allocation Category Definitions (1988)	
Allocation	Description
	development will be limited to anchoring devices for the offshore facilities. Fleeting areas are generally needed at the junction of two waterways, close to a large number of barge terminals, or near a navigation lock.
7. Minor Commercial Landings	Tracts allocated for minor commercial landings will be available for public or private development of small-scale barge facilities. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks. Because this use is intermittent and usually not a major activity, there would generally be no significant impact of adjacent land owners.
8. Industrial Sites	Tracts allocated for industrial sites will be available for development of waterfront industries. These sites would be conveyed to a developer at fair market value either at public auction sale in fee or by easement. TVA technical assistance may include feasibility studies, promotional brochures, industrial site planning, and technical training.
9. Industrial Access	On tracts allocated for industrial access, developers of private backlying lands could be permitted access across TVA property for water intake, waste water discharge, or conveyance of commodities (i.e.: natural gas pipelines). Industrial access is usually compatible with other uses, such as forest management and wildlife management, and these tracts may serve as a buffer between the shoreline and backlying industrial development.
10. Retained Development	On tracts designated as retained development, investments have been made in permanent facilities, such as buildings or maintenance facilities. Activities that do not conflict with existing development can be permitted on the tracts.
11. Right-of Way Protection	On Tracts allocated for right-of-way protection, TVA has established vegetation to protect and stabilize the integrity of road cuts or fills. These tracts will be managed to maintain the vegetative cover.
12. Forest Management	Tracts allocated for forest management will be managed to maximize production of forest products and economic returns while enhancing or complementing other uses, such as wildlife management and recreation. All technically acceptable silvicultural and harvesting treatments may be applied in appropriate circumstances. Such treatments could include thinning, improvement cuts, selection, group selection, shelterwood, and clearcut silvicultural and harvest methods. Additional resource management activities such as timber stand improvement, planting, controlled burning, cattle exclusion, road construction, kudzu control, and other measures would be applied as appropriate. A multidisciplinary TVA team will decide which management treatments to apply on each tract to benefit the forest resources and complementary uses.
13. Wildlife Management	Tracts allocated for wildlife management will be managed to protect and enhance wildlife habitats and restore depleted or regionally rare populations of certain species. To accomplish these management objectives, TVA will work closely with Federal and State fish and wildlife agencies. In cases where TWRA can most effectively manage wildlife habitat, TVA will make tracts available for State management, with

Table 2.1-1. Allocation Category Definitions (1988)	
Allocation	Description
	<p>tenure based on demonstrated need and submission of acceptable wildlife management plans.</p> <p>Each tract allocated for wildlife management will be managed for a featured group or groups of wildlife species (upland wildlife, wetland wildlife, or waterfowl) or, in some cases, a particular wildlife species. Existing habitat conditions on each tract were analyzed during the data-gathering phase of this planning process to determine the major wildlife group or species to be featured on each tract. Tract-specific, detailed management plans will be developed to enhance or preserve habitat conditions required by the featured group or species.</p> <p>Habitat improvement will be achieved through wildlife provisions in agricultural license agreements, forest management prescriptions, and activities funded by TVA's Wildlife and Natural Heritage program. Selected tracts may be used to demonstrate or develop innovative wildlife management activities such as creation of nesting habitat for resident Canada geese, management of existing wading bird colonies, and expansion of raptor restoration work. Tracts containing unique concentrations of easily observed wildlife may be developed as public wildlife observation areas. In some cases, especially on small or disjunct tracts, protection or maintenance of existing habitat conditions will be the best management alternative.</p>
14. Agriculture	<p>Tracts allocated for agriculture will be managed to protect their potential for agricultural use, promote increased agricultural productivity for row crops or pasture, and demonstrate multiple-use developments compatible with preservation of agricultural lands. They contain a significant amount of prime farmland or farmland of State-wide importance. These tracts will be available for agricultural licensing to local farmers, with restrictions to protect topsoil, prevent erosion, and benefit wildlife.</p> <p>In addition to those tracts specifically allocated for agriculture, many tracts allocated for other long-term uses are suitable for interim agricultural licensing. In these cases, the tract description will indicate that portions of the tract will be considered for agricultural licensing.</p>
15. Small Wild Areas	<p>Tracts allocated for small wild areas have exceptional natural, scenic, or aesthetic qualities and will be available for informal, low-impact types of outdoor recreation such as hiking, primitive camping, nature photography, and bird watching. Motorized vehicles will be prohibited. Development may include foot trails, signs, parking areas, and primitive camping sites. Efforts will be made to encourage public use and to interpret the natural features of these areas for visitors.</p>
16. Habitat Protection	<p>Tracts allocated for habitat protection areas will be managed to protect populations of species that have been identified as threatened or endangered by the U. S. Fish and Wildlife Service or that are considered rare in Tennessee. Unusual or exemplary biological communities or unique geological features are also placed in this category for protection. Tracts allocated for this use cannot accommodate any management activities that are not specifically designated to perpetuate the featured species or that would jeopardize the ecological quality of the site. Heavy public use will be discouraged.</p>

Table 2.1-1. Allocation Category Definitions (1988)	
Allocation	Description
	Motorized vehicles will be prohibited.
17. Visual Management and Visual Protection	Proposals for management or development of tracts for visual management must include provisions for maintaining or enhancing the quality of the visual resources of the tract, in accordance with Visual Resource Management Recommendations (Appendix C of the 1988 Plan). This designation does not preclude any otherwise acceptable management or development activity. However, on tracts allocated for visual protection, TVA intends to restrict activities that would alter the unique or important visual resources. This is generally a single-use allocation, considered incompatible with other developmental uses.
18. Historic Preservation	On all tracts allocated for historic preservation, TVA will protect or interpret significant remnants of the prehistoric and historic past. These may be archaeological sites, buffers to preserve the settings of structures of historic or architectural significance, and historically significant boat landings of trails. This designation precludes any uses that would damage or destroy the cultural resources or diminish the public's appreciation of the cultural values of the tract.
19. Open Space	Tracts allocated for open space are generally narrow strips of public land adjacent to the shoreline that, in their natural state, contribute to the overall aesthetics of the reservoir.

2.1.2. The Planning Process for the Action Alternatives

The action alternatives were developed using information obtained from the public meetings and scoping meetings with stakeholders, community leaders and peer groups as described in Section 1.5 and Appendix A. In addition, TVA reviewed existing and newly collected field data both on land conditions and resources. Each parcel of land was reviewed to determine its physical capability for supporting certain uses, other potential suitable uses of such land, and the needs of the public expressed during the scoping process. Based on this information, the planning team allocated land parcels to one of seven allocation zones for each of the action alternatives (see Table 2.1-2).

TVA Shoreline or Marginal Strip Land. In the 1988 Plan, TVA did not “plan” its marginal strip property. Over the years, when TVA sold land on Watts Bar Reservoir, a strip of land was retained lying between either the 750 or 741 foot contour and the water’s edge. The majority of this public land is encumbered by outstanding shoreline access rights that give back-lying property owners the right to construct private water-use facilities subject to TVA’s approval under Section 26 of the TVA Act. To be consistent with the other planned lands on Watts Bar Reservoir and with other TVA reservoir land plans, TVA intends to manage or “plan” its marginal strip property. Under the Action Alternatives (B and C), TVA would manage these lands in Zone 7, Shoreline Access, as defined under SMI.

Committed Land. In the 1988 Plan, TVA did not manage lands designated for project operations or lands committed through legal tenure, including easements, leases, license agreements, outstanding land rights, and designated natural areas. Under the Action Alternatives (B and C), lands committed in the 1988 Plan to a specific use would be

Table 2.1-2. Land Use Zone Definitions

Zone	Definition
1 Non-TVA Shoreland	<p>Shoreland located above summer pool elevation that TVA does not own in fee or land never purchased by TVA. TVA is not allocating private or other non-TVA land. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA's allocation decision. Non-TVA shoreline includes:</p> <ul style="list-style-type: none"> • Flowage easement land—Privately or publicly owned land where TVA has purchased the right to flood and/or limit structures. Flowage easement rights are generally purchased to a contour elevation. Since construction on flowage easement land is subject to TVA's 26a permitting requirements, the SMP guidelines discussed in the definition of Zone 7 would apply to the construction of residential water use facilities fronting flowage easement land. SMP guidelines addressing land-based structures and vegetation management do not apply. • Privately owned reservoir land—This was land never purchased by TVA and may include, but is not limited to, residential, industrial, commercial, or agricultural land. This land, lying below the 500-year flood elevation, is subject to TVA's 26a approvals for structures.
2 Project Operations	<p>All TVA reservoir land currently used for TVA operations and public works projects includes:</p> <ul style="list-style-type: none"> • Land adjacent to established navigation operations—Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations—Generation facilities, switchyards, and transmission facilities and rights-of-way. • Dam reservation land—Areas used for developed and informal recreation, maintenance facilities, watershed team offices, research areas, and visitor centers. • Navigation safety harbors/landings—Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons—Areas with structures placed on the shoreline to facilitate navigation. • Public works projects—Includes fire halls, public water intakes, public treatment plants, etc. (These projects are placed in this category as a matter of convenience and may not relate specifically to TVA projects.) • Land planned for any of the above uses in the future.
3 Sensitive Resource Management	<p>Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment.</p>

Zone	Definition
	<p>Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are:</p> <ul style="list-style-type: none"> • TVA-designated sites with potentially <i>significant archeological resources</i>. • TVA public land with <i>sites/structures listed on or eligible for listing on the National Register of Historic Places</i>. • <i>Wetlands</i>—Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • <i>TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes</i>. • <i>TVA public land fronting land owned by other agencies/individuals</i> for resource protection purposes. • <i>Habitat Protection Areas</i>—These TVA Natural Areas are managed to protect populations of species identified as threatened or endangered by the USFWS, state-listed species, and any unusual or exemplary biological communities/geological features. • <i>Ecological Study Areas</i>—These TVA Natural Areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • <i>Small Wild Areas</i>—These TVA Natural Areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support informal, low-impact types of outdoor recreation. • <i>River corridor with sensitive resources</i>—A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. These areas will be included in Zone 3 when identified sensitive resources are present. • <i>Significant scenic areas</i>—These are areas designated for visual protection because of their unique vistas or particularly scenic qualities. • <i>Champion tree site</i>—Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency “Champion Tree Program” designates the tree, while TVA designates the area of the sites for those located on TVA public land. • <i>Other sensitive ecological areas</i>—Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations. • <i>Land planned for any of the above uses in the future.</i>

Zone	Definition
<p>4</p> <p>Natural Resource Conservation</p>	<p>Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are:</p> <ul style="list-style-type: none"> • <i>TVA public land under easement, lease, or license</i> to other agencies for wildlife or forest management purposes. • <i>TVA public land fronting land owned by other agencies</i> for wildlife or forest management purposes. • <i>TVA public land</i> managed for wildlife or forest management projects. • <i>Informal recreation areas</i> maintained for passive, informal recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • <i>Shoreline Conservation Areas</i>—Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • <i>Wildlife Observation Areas</i>—TVA Natural Areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • <i>River corridor without sensitive resources present</i>—A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are present (see Zone 3). • <i>Islands of 10 acres or less.</i> • <i>Land planned for any of the above uses in the future.</i>
<p>5</p> <p>Economic Development</p>	<p>Land managed for economic development purposes. Uses could include: business, commercial, light manufacturing, general industrial uses, and mixed use developments that combine commercial, industrial, residential, and recreational uses.</p> <p>Areas included are:</p> <ul style="list-style-type: none"> • <i>TVA public land under easement, lease, or license to other agencies/individuals for economic development.</i> • <i>TVA public land fronting economic development land owned by other agencies/individuals.</i> • <i>Parcels of land that are capable of supporting business, commercial, light manufacturing, and general industrial uses.</i> • <i>Parcels of land, greater than 500 acres, that are capable of supporting mixed-use development; these parcels are specifically identified in parcel descriptions.</i>

Zone	Definition
	<p>Types of development that can occur on this land are:</p> <ul style="list-style-type: none"> • Business parks—TVA waterfront land which would support business and light manufacturing activities. • Industrial access—Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites—Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas—Sites used by the towing industry to switch barges between tows or barge terminals which have both offshore and onshore facilities. • Minor commercial landing—A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks. • Mixed-use development—Parcels of land that could be used for a variety of uses, to include residential, commercial/light industrial, and recreation (live, work, play) developments. <p><i>(Commercial recreation uses, such as marinas and campgrounds, are included in Zone 6.)</i></p>
6	<p>Developed Recreation</p> <p>All reservoir land managed for concentrated, active recreational activities that require capital improvement and maintenance, including:</p> <ul style="list-style-type: none"> • TVA public land under easement, lease, or license to other agencies/individuals for recreational purposes. • TVA public land fronting land owned by other agencies/individuals for recreational purposes. • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • Land planned for any of the above uses in the future. <p>Types of development that can occur on this land are:</p> <ul style="list-style-type: none"> • Commercial recreation, e.g., marinas, boat docks, resorts, campgrounds, and golf courses. • Public recreation, e.g., local, state and federal parks, and recreation areas. • Greenways, e.g., linear parks located along natural features, such as lakes or ridges, or along man-made features, including abandoned railways or utility rights-of-way, which link people and resources together. • Water access sites, e.g., boat ramps, courtesy piers, canoe access, fishing piers, vehicle parking areas, picnic areas, trails, toilet facilities, and information kiosks.

Zone	Definition
7 Shoreline Access	<p>TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered. Requests for residential shoreline alterations are considered on parcels identified in this zone where such use was previously considered and where the proposed use would not conflict with the interests of the general public. As provided for in the SMP, shoreline access would be divided into three categories based on the presence of sensitive ecological resources and navigation restrictions. The categories are: (1) Shoreline Protection where no residential alterations would be permitted; (2) Residential Mitigation where special analysis would be needed; and (3) Managed Residential, where no known sensitive resources exist. Types of development/management that can occur on this land are:</p> <ul style="list-style-type: none"> • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths which can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap and gabions, and retaining walls. • Shoreline vegetation management on TVA-owned shoreline access shoreland. • Conservation easements for protection of the shoreline. • Other activities, e.g., fill, excavation, grading, etc.

allocated to a zone designated for that use, unless there is a need to make a change. Possible reasons to change allocations would be ongoing adverse impacts or a request by a license or easement holder. Projects such as the TVA Dam Reservation and public works projects would be allocated to Zone 2, Project Operations. Approximately 12,000 acres of the TVA land surrounding Watts Bar Reservoir are committed due to existing TVA projects and existing land use agreements (see Appendix D). Agricultural licenses are not considered to be committed uses because they are an interim use of TVA public land.

If sensitive resources were identified on a parcel with an existing land use agreement (leases, licenses, etc.), that parcel would remain zoned for the committed use, unless an ongoing adverse impact is found. However, TVA review would be needed prior to future activities that could impact the identified sensitive resources on that parcel to ensure the proposed activity would not significantly impact the identified sensitive resource(s).

Uncommitted Land. The balance of uncommitted public land on Watts Bar Reservoir was considered for reevaluation. Field data was collected on many uncommitted parcels by technical specialists, such as archaeologists, historic architects, wetland specialists, and biologists to identify areas containing sensitive resources. Using maps that identified the location of sensitive resources (cultural, wetlands, threatened and endangered and visual) and the data collected during the scoping process, the capability and suitability for potential uses of each parcel were discussed.

Representatives from different TVA organizations including power generation, navigation, resource stewardship, recreation and economic development (the planning team) met to allocate the parcels into the new planning zones. The proposed allocations were made by consensus of the planning team members. Maps showing pre-allocation decisions are included in the back of this document.

Property Administration The existing and proposed reservoir land plans take into consideration TVA policy, guidelines, and environmental laws and regulations in developing a strategy to manage resources by identifying suitable uses for each tract of land. As administrators of TVA public land, the watershed team uses the plan along with TVA policies and guidelines to manage resources and to respond to requests for the use of TVA public land. All inquiries about, or request for the use of TVA public land on Watts Bar Reservoir should be made to TVA's Watts Bar/Clinch Watershed Team, 260 Interchange Park Drive, Lenoir City, Tennessee, 37772-5664, phone 865-632-1320.

Requests generally fall into one of four categories:

- A proposed land use that is consistent with the allocation in the plan.
- A proposed land use that is not consistent with the plan allocation but is not otherwise inconsistent with TVA policy or legal authority.
- Public service uses not specifically considered during the development of the plan.
- A proposed land use that is not consistent with the plan allocation and is also precluded by TVA policy or legal authority.

Proposals that fall into the fourth category of request would normally be denied at the Watershed Team level. For each of the other three categories of requests, the applicant would be required to demonstrate the public benefits of the request, the need for TVA public land, and the capability of the tract to support the requested use. The applicant must also provide information about the proposed investment schedule, capital improvements, and other information typically required of any applicant for the use of TVA public land.

When a proposal is consistent with the allocated use (category 1), the request would be reviewed in accordance with NEPA and other legal authorities. If a proposed land use is consistent with TVA policies but is not congruent with the allocated uses for a parcel (category 2), the applicant would be asked to consider other tracts allocated for the proposed use. If an applicant finds none of the alternatives to be satisfactory, they would be asked to provide justification that a modification to the plan is warranted and in the best public interest. If justifications are provided that are satisfactory to TVA, the agency would consider changing the allocation to accommodate the proposed need.

For requests falling within categories 2 and 3, TVA staff would use resource information and information provided by the applicant to determine if the requested site is physically capable of supporting the proposed use. If the capability evaluation reveals that the tract does not have the physical characteristics necessary to support the proposed use, the request will be denied. If the tract is found to be capable of supporting the proposed use, an interdisciplinary TVA team would conduct a suitability review that would include, in addition to public input, an assessment of the impacts on the environment, adjacent land uses, surrounding allocations, land management goals, reservoir plan objectives, and

socioeconomic conditions. Public input would be a key component of this suitability analysis. If the request is found to be suitable, it would be coordinated within TVA, following established land use review processes.

Access corridors for public works/utility projects proposed on any TVA public land that do not affect the zoned land use or sensitive resources would not require an allocation change so long as such uses would not be inconsistent with the use of the allocated zone. (An access corridor is a linear pathway extending between TVA and the adjacent landowner to the water. It is located in a way that minimizes removal of trees or other vegetation and potential for erosion. The corridor should be stabilized and revegetated with native species.) Any other requests involving a departure from the planned uses would require the approval of the TVA Board of Directors.

2.1.3. Action Alternative Allocation Proposals

Under the Action Alternatives B and C, TVA would update land allocations using resource data, computer analysis, stakeholder input, and TVA staff input to generate the proposed mix of land allocations. Private land that adjoins the reservoir is not included in these allocations. This includes land over which TVA has flowage easement rights to permanently or temporarily flood. Alternatives B and C include about 6,000 acres not planned in 1988. This previously unplanned land includes sites with license agreements, former Reservoir Operations land, and marginal strips of retained land fronting TVA sale tracts. These retained strips of TVA land encumbered with water access rights have been allocated to Shoreline Access (Zone 7), based on predetermined access rights as documented in TVA's 1998 Shoreline Management Initiative (SMI).

During the scoping period, TVA received 12 proposals to allocate 32 parcels (3,654 acres) of TVA public land. The proposals range from mixed-use development to natural resource conservation.

2.1.4. Action Alternative B – Balanced Development and Recreation

Under Action Alternative B, Balanced Development and Recreation, TVA would help promote economic development and commercial recreation by allocating 9 of the 32 parcels to Zone 4, Zone 5, or Zone 6 (see Table 2.1-3). The remaining 23 parcels are allocated for these zones; committed land for TVA project operations, excluded to protect significant resources, or are lands with deeded access rights which would be impractical to consider for these allocations.

Natural resource conservation and recreation uses would be available on land not allocated for economic and commercial development and on other land until economic development opportunities arise.

Table 2.1- 3 Comparison of Proposed Zone Allocations, by Alternatives

Parcel Number	Acres	Proposal	Alternative A No Action	Alternative B Balanced Development and Recreation	Alternative C Balanced Conservation and Recreation
9	122.5	Individual requests allocate to Zone 3 or Zone 4	Zone 6	Zone 6	Zone 4
10	78.4	Same as above	Zone 6	Zone 6	Zone 4
44	23.1	Roane County Alliance requests allocate to Zone 6	Zone 4	Zone 6	Zone 4
47	21.8	Camp John Knox requests transfer of property *	Zone 3	Zone 3	Zone 3
80	14.9	Tennessee Clear Water Network requests allocation to Zone 4	Zone 4	Zone 6	Zone 4
119	8.4	City of Kingston requests allocation to Zone 5 or 6 for development and commercial recreation **	Zone 7	Zone 7	Zone 7
120	12.9	Same as above	Zone 2	Zone 6	Zone 6
121	25.8	Same as above	Zone 6	Zone 6	Zone 6
122	9.0	Same as above ***	Zone 2	Zone 2	Zone 2
123	19.6	Same as above **	Zone 7	Zone 7	Zone 7
12-55	1.4	Same as above	Zone 6	Zone 6	Zone 6
142	319.5	City of Oak Ridge and Roane County request allocation to Zone 5 for mixed-use development on the former Clinch River Breeder Site	Zone 5	Zone 5	Zone 4
143	391.3	Same as above	Zone 5	Zone 5	Zone 4
144	48.0	Same as above *	Zone 3	Zone 3	Zone 3
145	332.9	Same as above	Zone 5	Zone 5	Zone 4
146	98.6	Same as above *	Zone 3	Zone 3	Zone 3
147	11.9	Same as above	Zone 5	Zone 5	Zone 4
148	21.2	Same as above	Zone 5	Zone 5	Zone 4
153	46.2	Individual requests allocation to Zone 5 **	Zone 7	Zone 7	Zone 7
218	61.4	City of Rockwood request an allocation to Zone 6 for Commercial Recreation	Zone 5	Zone 6	Zone 4
224	128.6	Advocates Oak Ridge Reservation requests allocation to Zone 3 *	Zone 4	Zone 4	Zone 4
257	9.3	Developer requests allocation for commercial recreation	Zone 4	Zone 6	Zone 4
294	34.0	Meigs and Rhea Counties requests an allocation of Zone 5 for mixed-used development ****	Zone 2	Zone 2	Zone 2
295	51.6	Same as above	Zone 4	Zone 5	Zone 4

Parcel Number	Acres	Proposal	Alternative A No Action	Alternative B Balanced Development and Recreation	Alternative C Balanced Conservation and Recreation
296	198.0	Same as above, plus Tennessee Wildlife Resources Agency requests transfer of parcels 296-299 to the State of Tennessee	Zone 4	Zone 5	Zone 4
297	245.0	Same as above	Zone 5	Zone 5	Zone 4
298	34.4	Same as above	Zone 5	Zone 5	Zone 4
299	370.0	Same as above	Zone 6	Zone 5	Zone 4
300	240.0	Same as above ****	Zone 6	Zone 6	Zone 6
3	280.4	Same as above ***	Zone 2	Zone 2	Zone 2
4	145.6	Same as above ***	Zone 2	Zone 2	Zone 2
5	249.0	Same as above	Zone 6	Zone 5	Zone 6

(1*) Parcel contains significant resources and must be assessed before changing allocation.

(2*) Parcel includes TVA shoreline (Zone 7) that fronts private development with deeded access rights. Allocation would not change.

(3*) Parcel is zoned for project operations. Allocation would not change.

(4*) Parcel contains a 185 acre license agreement and would not change without formal communications or written agreement from the licensee.

TVA would implement IRM activities on lands allocated for Zone 2, Project Operations, Zone 3, Sensitive Resources, Zone 4, Natural Resource Conservation, and Zone 6, Developed Recreation. IRM would focus on four primary resource areas: natural resources, recreation resources, cultural resources, and visual resources. TVA would seek to engage partners to help implement IRM and facilitate opportunities.

2.1.5. Action Alternative C – Balanced Conservation and Recreation

Under Action Alternative C, Balanced Conservation and Recreation, TVA would help promote conservation of natural resources and informal recreation by allocating 12 of the 32 parcels to Zone 4 or Zone 6 (see Table 2.1-3). The remaining 20 parcels are already allocated for these zones; committed for TVA project operations or are lands with deeded access rights which would be impractical to consider for these allocations.

Under this alternative, natural resource conservation and informal recreation would predominate on TVA land suitable for those activities.

TVA would implement IRM activities on lands allocated for Zone 2, Project Operations, Zone 3, Sensitive Resources, Zone 4, Natural Resource Conservation, and Zone 6, Developed Recreation. IRM would focus on four primary resource areas: natural resources, recreation resources, cultural resources, and visual resources. TVA would seek to engage partners to help implement IRM and facilitate opportunities.

2.2. Comparison of Alternatives

This section compares the environmental impacts of the three alternatives based on the information and analyses provided in Chapter 3, the Affected Environment, and Chapter 4, Environmental Consequences.

Section 101 of the NEPA declares that it is the policy of the Federal government to use all practicable means and measures, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations. TVA believes that all alternatives would be consistent with this policy, and TVA has interpreted the regulations and laws governing it to be consistent with this policy, as required by Section 102(1). Because of the environmental safeguards in each alternative, a wide range of beneficial uses of the environment could be obtained without degradation or unintended consequences under each alternative.

Direct comparison of parcel land uses between Alternatives A, B, and C is difficult because the 1988 Plan land allocation definitions and the proposed Alternatives B and C plan definitions are not the same. The 1988 Plan used 19 land use allocations to manage 10,238 acres of land. Many of the parcels were designated for multiple uses. The 1988 Plan did not allocate 3,584 acres of TVA lands at Watts Bar Dam and electric power plant reservations, nor 2,388 acres of residential shoreline or other marginal shoreline strips along the reservoir. The proposed alternatives allocate all marginal shoreline strips with existing shoreline access rights to Zone 7 (Shoreline Access) and all project lands to Zone 2 (Project Operations). Despite these differences, the allocated land uses in the 1988 Plan (Alternative A) and the proposed Action Alternatives (B and C) for each TVA parcel are identified and compared in Appendix D. For comparison purposes, an approximate relationship between the 1988 allocation categories and the current planning zones is shown in Table 2.2-1.

In implementing Alternative A, actual use for land with multiple allocations would be decided on a case-by-case basis, making the assessment of impacts speculative. Therefore, for comparison purposes, a single allocation zone has been assigned that best represents the intended use (see Table 2.2-1). Under Alternative A, 3,465 acres of land could be allocated to sensitive resource management-type uses, 3,299 acres could be allocated to natural resource conservation-type uses, 1,471 acres could be allocated to economic development uses, and 1,973 acres could be allocated to recreational uses. The actual allocation would be determined on a case-by-case basis as requests are received.

Under Alternative B, the greatest amount of land would be allocated for Economic and Recreation Development at both the former Clinch River Breeder and Lowe's Branch sites. Potential impacts to threatened or endangered species are expected to be slightly greater than alternative A, but still minor and insignificant; and could be further reduced for aquatic species by the use of BMPs for soil disturbances. There would be greater but still insignificant potential for impacts to water quality. Under Alternative B, 3,465 acres of land could be allocated to sensitive resource management-type uses, 3,002 acres could be allocated to natural resource conservation-type uses, 2,278 acres could be allocated to economic development uses, and 1,415 acres could be allocated to recreational uses. The actual allocation would be determined on a case-by-case basis as requests are received.

Under Alternative C, more acreage is allocated for sensitive and natural resource uses than is designated than under Alternatives A and B (see Table 2.2-2). Under Alternative C,

approximately 2,000 to 2,200 acres of land would be allocated to more protective uses (Zones 3 and 4) than under Alternatives A and B. Approximately 52 acres are proposed to be allocated to Economic Development. A large number of sites previously allocated for access for future industrial development would be allocated to more protective categories.

In addition, approximately 2,388 acres of marginal shoreline strip, not included in the 1988 Plan, would be allocated for Shoreline Access due to existing deeded rights for water access. Under Alternatives C approximately 2,226 acres that were previously allocated to Economic Development under Alternative B are considered for allocation to Natural Resource Conservation.

Table 2.2-1. Comparison of Land Uses by Alternatives

Existing (1988) Allocation Categories	Current Land Use Zones	Alternative A		Alternative B		Alternative C	
		Acres	%	Acres	%	Acres	%
Retained Developed ¹ Previously Unplanned ²	Zone 2 - Project Operations	3,584	22	3,571	22	3571	22
Historic Preservation Habitat Protection Visual Man. & Protection Small Wild Areas	Zone 3 - Sensitive Resource Management	3465	22	3465	22	3465	22
Wildlife Management Forest Management Agriculture Open Space Right-of-Way Protection	Zone 4 - Natural Resource Conservation	3299	20	3,002	18	5,288	32
Industrial Sites Barge Terminal Sites Minor Landings Fleeting Area Industrial Access	Zone 5 - Economic Development	1,471	9	2,278	14	52	1
Public Recreation Commercial Recreation Water Access Informal Recreation	Zone 6 - Developed Recreation	1,973	12	1,476	9	1,415	8
Previously Unplanned ³	Zone 7 - Shoreline Access	2,388	15	2,388	15	2,388	15
	Total	16,179	100	16,179	100	16,179	100

¹ Retained development - A TWRA maintenance area (9 acres) and Kingston Pumping Station (16 acres) are the only inclusions from the 1988 Plan.

² Primarily consists of TVA project lands from dam and electric power plant reservations.

³ Consists of TVA lands described as marginal strip in the 1988 Plan.

Table 2.2-2. Comparison of Acres Allocated to Sensitive and Natural Resource Uses

Alternative	Allocation	Acres
Alternative A	Historic Preservation, Habitat Protection, Visual Man. & Protection, Small Wild Areas, Wildlife Management, Forest Management, Agriculture, Open Space, Right-of-Way Protection	6,764
Alternative B	Zone 3 - Sensitive Resource Management Zone 4 – Natural Resource Conservation	6,467
Alternative C	Zone 3 - Sensitive Resource Management Zone 4 – Natural Resource Conservation	8,753

2.3. Impacts Summary

The range of impacts that could result from implementation of the alternatives is bracketed by the impacts of Alternatives B and C. Alternative B has greater acreages of land allocated to developed uses, including Industrial/Commercial Development and Developed Recreation, than the other alternatives. Adoption of Alternative A would allow recreational and industrial development and, therefore, would have greater natural resource potential impacts than Alternative C, but less than Alternative B. Implementation of Alternative C would result in the largest amount of acres allocated to Zone 4, Natural Resource Conservation. A qualitative rating of the potential impacts of the alternatives with respect to different potentially affected resources is provided in Table 2.3-1. Mitigation measures to further reduce impacts are included in Section 4.20. TVA has not selected a preferred alternative.

Table 2.3-1. Impacts Summary of the Alternatives

Resource	Potential Impacts	Alternative A	Alternative B	Alternative C
Terrestrial Ecology	Loss and fragmentation of terrestrial habitat by clearing and alteration of vegetation could impact the composition and abundance of species. Loss of habitat.	Forest areas generally remain forested. Potential for up to 1,500 acres for Economic Development. Some potential for fragmentation to the resource. No IRM Eventual loss of 3,400 acres of high quality habitat.	Greater potential for fragmentation. Potential for up to 2,300 acres for Economic Development including "Mixed Use" IRM on Zones 2, 3, 4, and 6. Eventual loss of 3,700 acres of high quality habitat.	Less potential for fragmentation as 54% of acreage is allocated to Zones 3 and 4. Minimal Economic Development. IRM on zones 2, 3, 4, and 6. Retention of high quality habitat, beneficial impacts.
Threatened and Endangered Plants	No T&E Plants Impacted. Clearing and alteration of vegetation could impact the composition and abundance of state listed species.	Potential impact for state-listed plant species insignificant.	Slightly greater impacts than Alt. A to state-listed plants.	No impacts.
Threatened and Endangered Animals	Clearing and alteration of vegetation could impact the composition and abundance of species.	Not likely to adversely effect federally listed terrestrial animals, some impacts to state listed species.	Not likely to adversely effect federally listed terrestrial animals, greater impacts to state listed species than Alt. A	Beneficial impacts to federal and state listed species.
Threatened and Endangered Aquatic Animals	Pollution and siltation from erosion and ground disturbance activities.	Not likely to adversely effect federally listed aquatic animals. BMPs would reduce impacts.		Improved riparian areas, greatest protection to sensitive aquatic species.
Managed Areas and Sensitive Ecological Sites	Incompatible land use on adjacent areas. Impacts on sensitive resources.	No Impacts	Potential impacts to Grassy Creek HPA.	No Impacts.
Water Quality	Toxic substances, erosion, and nutrient loading.	Some potential for impacts due to commercial, industrial, and recreational development.	Greater impacts than Alt. A from erosion and siltation.	Beneficial Impacts.
Aquatic Ecology	Alteration of aquatic habitat, primarily from shoreline modification.	Generally no change from existing conditions.	Some accelerated shoreline erosion due to clearing of riparian vegetation	Increases in woody shoreline vegetation over time would be beneficial.

Wetlands	Adverse effects to or destruction of wetlands from land clearing and ground disturbance.	Impacts mitigated under Section 404 and EO 11990; insignificant impacts.		Greater protection by designation of more land to Zones 4. Beneficial effects through IRM.
Floodplains	Adverse impacts to floodplain values floodplain.	Minor and insignificant Impacts.		
Land Use	Impacts to TVA's public lands.	Some loss of public lands.	Greatest loss of Public Lands.	Maintains public ownership of land.
Prime Farmland	Conversion of prime farmland. A farmland rating required before development.	Some potential conversion of prime farmland. Insignificant impact to region.	Greater potential for conversion of prime farmland. Insignificant impact to region.	Least potential conversion of prime farmland. Insignificant impact to region.
Cultural Resources	Potential for activities to affect archeological and historic properties.	Potential impacts would be addressed in site-specific reviews. Insignificant impacts.	Insignificant impacts provided a phased identification and evaluation procedure established for potential impacts.	
Air Quality	Emissions from construction and development activities.	Insignificant impacts depending on the industries recruited.	Greater but still insignificant impacts.	Least impacts to air quality.
Navigation	Interference with commercial navigation.	No change from existing conditions.	Impacts to barge terminal on Parcel 218 Insignificant.	Impacts to barge terminals on Parcel 218 and potential terminal loss on Parcel 298.
Recreation	Availability of recreational opportunities.	Largest amount of Zone 6 land. Loss of existing informal recreation at some sites, reduction of diverse recreation opportunities.	Adverse impact to informal recreation opportunities. Increased developed recreation in Zone 5	Maintains informal and diverse recreation opportunities.
Visual Resources	Effects on Scenic Quality. Gradual degradation of visual resources.	No change in present conditions.	Protection of some scenic resources and maintenance of scenic integrity and attractiveness at a moderate to high level.	
Socioeconomic Impacts and Environmental Justice	Effects to the local economy and communities. Dependant on the nature of future proposals.	No change in opportunities for future development. Possible development sites include Breeder site and Lowe's Branch site. Significant environmental justice impacts not likely.	Most acreage allocated to industrial/ commercial development. Greatest potential development at Breeder site and Lowe's Branch site. Could have positive impact on local economy but negative impact on quality of life.	Almost no opportunities for future development.
Other Issues	Impacts form Noise	Some insignificant noise impacts from commercial and industrial development.	Greatest but still insignificant impacts from noise.	Least impacts from noise.